Rewarding Creative Problem Solving and Expectations for Creative Motives, Competence and Satisfaction of Workers During Critical Incidents

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Abstract

There is growing interest in creativity and innovation at work, and the role of reward types in creative problem solving dispositions of workers in organizations. However, extending creative performance to problem resolution during critical incidents remains a virgin ground pending exploration. This study examined employees' perceptions of creativity rewards and effects on creative motive, competence and feelings of satisfaction. Participants were 50 and a reliable instrument was used to determine the opinions of respondents. Descriptive analysis, bivariate correlation and regression were applied for data analysis. According to results, non-material reward significantly predicted intrinsic creative motive of workers while material reward significantly determined extrinsic creative motive. Analysis also reported that non-material reward significantly predicted creative competence of employees. While non-material and material rewards significantly predicted satisfaction of employees, material reward by contrast failed to predict satisfaction. It is evident that intangible and tangible incentives determined creativity dimensions though at varying directions and degrees. Findings also supported theories used in explaining rewards and creative behaviors. Discussion is centered on creative and innovative culture, and how the use of reward types can improve creative responses at critical incidents. Furthermore, expansion of investigations on incentive types and creative behaviors has been suggested.

Keywords: creativity, rewards, motivation, competence, satisfaction, critical incident

Introduction

The increasing importance of creativity and innovation at work provides a powerful impetus for performance, competitiveness and sustainability of enterprises. Since creativity is the production of novel and useful ideas by workers (Amabile, 2012; Charness & Grieco, 2018), creative problem-solving is necessary during routine assignments and critical in face of critical incidents. Creativity in products, services, procedures, and processes is now more important than ever, and highly needed in established enterprises and new ventures (Seratt, 2009). In a changing and highly competitive knowledge economy, ideas are sources of competitive edges considering that knowledge and technologies are products of creativity. With creative performance, ideas are transformed into new products, services and approaches in order to spur performance and beat competitors, while resolving emerging organizational demands. There are success stories testifying the effectiveness of creative approaches in making organizations more achievable, and managing creativity has therefore become a complex business (Tan, 1998). This is even more complicated and delicate when resolving intricate issues that are risk prone during critical incidents. In order to effectively manage creativity in the work place, understanding the factors that predict creative performance is a priority (Da Silva et al., 2010). In this respect, the strength of contextual and organizational factors such as rewards has been acknowledged in creativity management. Human resources drive creativity and innovation business of any enterprise, and this goes with reward packages as any other task of the enterprise. If employees deserve rewards during routine activities, creative problem solving has to be highly compensated particularly during critical incidents. Wang & Holahan (2017) explained that all innovations depend on creative work, which produces new and useful ideas, and motivating a creative workforce is an important concern for business organizations. This requires an organizational culture that values innovation, where there is encouragement for personnel to think differently, take calculated risks, and challenge the status quo (Serrat, 2009). A culture of reward for creativity is capable of motivating workers into creative problem solving and such incentive plans can extend creative behaviors to the arena of critical incidents. Organizational culture influences employees thinking, feelings and actions, and provides meaning, direction, and mobilizes employees into respective task assignments (Tan, 1998).

Considering that critical incidents have to be transformed into gains and not losses, some organizations have encouraged creative culture to engineer creative values at turning points through reward packages. This is why motivating creative workers may need different strategy as compared to general employees (Chan, 2017). In this respect, non-material and material packages have been put in place by some employers to catalyze creative performance. The demands and deployment of cognitive resources at unusual occurrences necessitates employee workplace responses, and this is exigent on employees' creative work behavior. Therefore, employees need to be motivated in order to deploy versatile to handle diverse challenges, and creative competence cannot be underrated in the processes. These are responses to possible disasters, imminent danger and losses at work, which are compelling on management. In the study it was expected that creativity rewards would be translated into creativity relevant behaviors capable of resolving challenges of critical incidents.

Creativity is indispensable to develop new products, improve customer services systems and operational strategies (Tan, 1998), and this is more exigent with critical incidents. This is why the exploration of intangible and tangible reward schemes target creative behaviors during stressful and unexpected events. The study used the Componential Theory of Creativity (Amabile, 1983), which describes the creative process and influences on the process and its outcomes. Among the four components necessary for any creative enterprise, the role of

context and rewards in particular has been isolated to explain creative behaviors. The two-factor theory (Herzberg et al., 1959; Herzberg; 1966) is equally used to explore factors that affect creativity motivation of employees. The model strongly upholds that hygiene factors lead to neutral state of motivation, satisfaction and performance, while motivator factors produce a high state of motivation, satisfaction and performance. Drawing from observation and extant literature, the present study attempts to portray the role that creativity rewards can play in certain outcome measures (creative motives, competence and satisfaction). General expectations hold that innovative culture of the institution will promote creativity dispositions of employees. Recognizing that people who generally approach their work with an intrinsic orientation may be more consistently creative than people who adopt an extrinsic orientation (Amabile, 1997), the study projects a relationship between non-material rewards and intrinsic creative motive (Da Silva, Borlongan-Conway & Tokunaga 2010; Liu, Jiang, Shalley,, Keem, & Zhou, 2016). Recognizing that intrinsic motivation alone is incapable of ensuring creative performance, the paper argues that extrinsic factors are instrumental in creativity, and key links have been observed between material rewards and extrinsic creative motive (Chan & Ma, 2017; Sipa, 2018). This implies that high expectations of intrinsic creative motive are dependent on non-material rewards, while that of extrinsic creative motive will be derived from material rewards. Traditional work learning does not focus on resolving the mysteries of critical incident and individuals involved require positive attitudes, critical thinking and creative skills to acquire gains and prevent losses. This expresses the need for creative competence in order to effectively realize creative work behaviors and innovations. This requires prompt analysis, reorganization and transfer of knowledge, and motivation to energize and sustain creative work behaviors, which often suffer from moderating factors such as risk, pressure, anxiety and loss perception. The promotion of creative patterns in the enterprise expects that non-material rewards should correlate with creative competence (Awan & Zamir; 2016; Hon, 2012) in the process of knowledge production. Interest and emphasis is on the exploration of socially relevant skills that can achieve creativity within the context of creative culture. Satisfaction is a personal feeling that one derives from the job, and which is capable of increasing employee performance (Shawn, 2017), and creativity drives cannot be oversighted. It is obvious that reward for creativity should be able to engender employee satisfaction, but this is not the case in all situations. In this respect, Sacchetti and Tortia (2011) explained that the need to express one's own creativity depends on individual desires and satisfaction. The assumption holds that a correlation exists between creativity rewards and satisfaction, since satisfaction has been perceived as a key factor in creative performance. It is therefore expected that this measure of performance will be predicted by the independent variables of the study. Though reward cues are capable of facilitating creative behaviors and ensuring positive feelings that workers desire from creative ventures, the desired feelings have to be supported by incentive schemes.

Managing Critical Incidents Through Creativity Rewards

Interest in creativity during critical incidents at work, though necessary in facilitating routine occupational challenges, is crucial in resolving sudden, unexpected and anxiety-provoking happenings. In 2000 the Irish National Teachers' Organization (INTO) & Ulster Teachers' Union (UTU), explained that incidents become critical when they overwhelm the usual coping capacity of individuals and organizations, involving an intense threat to life, health, property, security, values or integrity. Most often the controversy surrounding creativity and performance is on the line of action that deserves creativity reward during routine assignments and during emerging situations, and when and how to administer the incentives. At best, critical incident is due some reward since creative performance is equally dependent on mental and physical exaction. Critical moments demand situation analysis, determination of the nature of

the problem, and prompt definition of solutions (Prayer, 1993). Responses require creative thinking because solutions are not obvious as there is no original solution to open-ended challenges. This implies intense cognitive manipulations such as perception, learning, retention, attention and imaging of the problem situation. The challenges could be based on anything from issues connected with individual working environment or habits to bigger and general issues such as the next great idea, product or service for the organization (Byron, 2006). Therefore, critical incidents require a sound mental status capable of producing novel solutions to emerging problems, and this is the challenge faced by most workers. In the process of creative performance, human resource systems should ensure that staff has diverse thinking or learning styles necessary in generating a variety of perspectives for a single problem (Sarett, 2009). Moreover, a creative and innovative culture provides an enabling environment for personnel to develop decision making skills and advance possible alternatives during the emergency. This reiterates the notion of a creative working climate which stimulates innovation, creativity and change within a company (Yee et al., 2014), and proper drives and competence need to the properly harnessed to manage unexpected work related events.

Managing the unexpected to improve creative performance has been a big challenge to workers, and management in some companies has responded special incentives to move their creative behaviors. But it should be noted that management of creativity varies and different organizations deploy different approaches to manage creativity (Tan, 1998). Surmounting these challenges is possible with positive critical incidents that make significant contributions to the organization, as well as those that sound negative but prevent losses to the company. This is a very difficult situation considering that negative critical incidents are stakes to be handled instantly and diligently, thereby demanding much cognitive resources. In addition, critical incidents generate emotional discomforts such as stress, and possibly cognitive disorientations. The critical nature of the incident depends on past and current experiences as well as the perception and coping skills of those involved in solution search (INTO & UTU, 2000). This suggests that the role of individual differences should be recognized, and areas of disparities isolated and threated for complementarity in creative performance ventures. Making a decision is always delicate and risky, and this requires coping skills to reduce stress in the process of creative problem solving. This is why Chan & Ma (2017) contended that creative performances are crucial and in order to maximize employees' creative performance, appropriate motivation is indispensable to maximize expression of creative behaviors. Although non-monetary rewards are often found to be positively related to creativity (Wang & Holahan, 2017), material and non-material incentives has been acknowledged as capable of facilitating creativity performances during unexpected and stressful occupational challenges. The central goal of this paper is to examine rewards being administered in organizations and expectations on creative motives, competence and satisfaction of workers during critical incidents. The role of context in the expression of creativity depositions has been given focus attention. An institution with a creative and innovative culture having reward strategies for creative performance in local context has been isolated for the investigation.

The Question of Rewards and Creative Dispositions In-Context

The Higher Institute of Management Studies (HIMS), Buea, Cameroon, appears a dynamic organization with people and production oriented culture. The enterprise upholds that a culture of innovation can make a great difference between success and failure in a highly competitive business environment. As a result, it has developed inbuilt innovative values in its structures and operations that allow for free thinking and creativity. Furthermore, it builds on the firm belief that creative performance of employees is crucial in helping creative organizations to

stay competitive in the transformation process (Chan & Ma, 2017). Apart from routine assignments, human resources policy and practices promote creative problem-solving, which is highly rewarded at all levels of operations. Moreover, the enterprise is characterized by a flat structure, where titles and other status distinctions tend to be downplayed, and this gives a feeling of importance to all staff as active contributors. Employees do not have bosses per say in the traditional sense, and risk taking is encouraged by accepting both successes and failures, particularly during critical incidents. Employees are encouraged to take risks by bringing in new ideas and designing projects in order to experiment them and remain very competitive in the market. HIMS pays a high price for developing the human capital base as an invaluable resource in creativity and innovation. Workers are subjected to learning strategies that build their potentials to accept challenges and creatively resolve emerging problems and they became physically and psychologically involved. Motivating employees' creative performance is quite a popular topic in the management of behaviors in organizations (Chan & Ma, 2017), and this has not escaped that attention of the enterprise. HIMS practices a reward system that embraces emerging demands of employees with some packages reserved creative problem solving during critical incidents. Apart from appreciations and petty cash awards, car and building assistance have been heavy awards for surmounting critical incidents. Though the enterprise considers awards are compensation for efforts at crisis resolution, it is also a proactive strategy to spur creative performance. Precisely this award is provided to workers who distinguish themselves in crafting solutions in the form of initiatives, creativity, invention and innovation.

There are many organizational factors that affect creativity and innovation, but the present study questions if reward for creative performance can facilitate creative problem solving during critical incidents and in addition generate positive feelings. The introduction of rewards to the staff of HIMS is evident with the belief that non-material rewards are capable of fostering intrinsic creative motives (Binnewies & Gromer, 2012; Liu et al., 2016). This is shown in the institution through training, appreciations and medal awards with the understanding that such packages constituting psychological rewards can activate intrinsic creative motives of employees during critical incidents. The question of material rewards being administered to the staff of the institution as a motivator to creativity has also been subjected to debate. Considering that creativity should be highest when an intrinsically motivated person with high domain expertise, and skill in creative thinking works in an environment high in supports for creativity (Amabile, 2012), the question is whether material rewards can influence extrinsic creative motives at critical incidents. Needs satisfaction of workers in the enterprise goes with extrinsic demands in terms of salaries, 13th month pay, snacks, evaluation, housing and fuel allowances. They are designed to spur performance, and this is consistent with some reports (Chan & Ma, 2017; Charness & Grieco, 2018; Sipa, 2018) that tangible reward is a catalyst to extrinsic creative motives.

The intrinsic-extrinsic incentive controversy has some bearing on the Two-Factor Theory (Herzberg et al., 1959; Herzberg, 1966), that “hygiene factors” influence neutral state of motivation and “motivators” attract high state of motivation. The present interest is whether material rewards and non-material rewards can respectively influence extrinsic and intrinsic creative motives. Creativity at all levels depends on competence and enterprises have been very conscious of the role knowledge and skills play in creative problem solving. Considering that non-material rewards are perceived as capable of determining creative competence of employees (Awan & Zamir, 2016; Hon, 2012; Kolibačova, 2014), it is still very skeptical if intangible packages administered to staff will enhance their creative competence to resolve unplanned challenges. Satisfaction is a key variable in creative performance following administration of incentive packages, and it has been argued that non-material and material

rewards determine satisfaction (Sarwar & Abugre, 2013; Yee et al., 2014). In order to reinforce work behaviors, variables that influence satisfaction have been identified, observations show that positive feelings depend on both material and non-material incentives. Despite the fact that physical and psychological factors relate with employees' job satisfaction and productivity (Sarwar & Abugre, 2013), it is still ambiguous to see clearly if workers are satisfied with intangible and tangible incentives, and whether it can facilitate creative problem solving behaviors to handle critical incidents.

Although some studies have examined the effect of reward on creativity, the question of results on dimensions of effects remain controversial (Eisenberger & Byron, 2011). Though some studies have shown that inducing intrinsic rewards increases creativity, others have not, thereby raising mix feelings about the types of rewards/incentives that can effectively determine dimensions of creative performance in organizations. However, the present study attempts to resolve some of the controversies. Drawing from the foregoing debates, it is expected that rewards being administered to employees will predict creativity dispositions of workers during sudden and unexpected occurrences.

Conceptual and Theoretical Framework

The section starts by exploring the concept of creativity within the context of problem solving at work. It operationalizes the concepts and variables in the way that they will be used in the conduct of the research study.

Conceptual Orientation

Creativity has been perceived as a complex construct which makes it rather difficult to define though consistent concepts are found across existing definitions (Zhang & Gheibi, 2015). Raju (2017) defined creativity as the ability to bring something into existence and this is distinguished by novelty, originality and invention. Creativity as a cognitive resource comprises the fundamental functioning of human information processing, which is new and appropriate in the process of problem solving. In terms of work, Amabile (2012) defined creativity as the production of a novel and appropriate response, product, or solution to an open-ended task, which must be appropriate to the task to be completed or the problem to be solved. Creativity is closely related to the idea of innovation, which is the successful implementation of creative ideas within an organization (Amabile & Pratt, 2016). A key characteristic is that creativity response must be useful to the task in question and not just any response. In problem-solving, such novel and unexpected drives often respond to emerging challenges such as critical incidents at work. Creative-thinking skills determine how flexibly and imaginatively people approach problems (Serrat, 2009), and this demonstrates the usefulness of creativity in problem solving at work. Such processes lead to products, ideas, procedures and discussions that are original and useful and the process is associated with ideas, imagination, inspiration, intuition and ingenuity (Amabile, 2012; Byron, 2006). They are all referred to as cognitive resources that are necessary in inspiring creative ventures in different occupation endeavors. Creative-relevant processes include cognitive skills that are conducive to taking new perspectives on problems and personality characteristics that lead the individual to take risks and eschew conformity (Amabile & Pratt, 2016). For instance, risk-taking describes the impulse to find and try original ideas, to go beyond ones' familiar boundaries of knowledge and explore new possibilities rather than staying in the relative security of what we already know (Byron, 2006). This suggests that individual, environmental and situational factors are essential factors in ensuring creativity in the workplace.

The concept of creative problem-solving starts with the understanding of a problem. Arkeya & Faruk (2017) defined problem as any event or situation, unforeseen, unwanted in any project or job which needs to be addressed and resolved before it becomes too complex. At work problems abound, resulting from deficiencies in relationship with people and task, drawing in responses from problem solving. Problem solving is the key competence used in handling changes, uncertainties and surprises in all situations where there is no routine response at hand (Csapó & Funke, 2017). Problem solving and decision making, though at times used interchangeably, are just closely related concepts because decision making is a problem solving activity. Furthermore, creative problem solving is a problem solving technique that creatively addresses a problem in a new way because the problem in question is a new experience. It is a self-directed cognitive and behavioral process of discovery and solution creation for emerging problems in different occupational domains and requires profound and divergent thinking. Recognizing that the ability to creatively solve a problem is often seen as an essential skill for individuals to succeed in today's world (Wieth & Burns, 2014), problem solving skills are critical in any action at work, and crucial during critical incidents.

The concepts of material and non-material rewards have been expanded to different directions with varying meanings. Material rewards generally refer to concrete immediate benefits designed to activate, energize and control behaviour, and this is often in terms of money, food, allowances and other fringe benefits. Although Omazić, Vlahov & Klindžić, (2011) defined material reward in terms of incentives directed toward securing and improving financial status of employees, the present paper extends material rewards to tangible non-financial incentives. Material rewards do not only involve money or cash but extends to vehicles, office space and medical expenses. They are also known as extrinsic motivators, and appear to be very important to individual's desire to work, particularly when available provisions are capable of satisfying felt needs. Omazić et al. (2011), further classified rewards into direct material gains such as salary system and other material incentives comprising salary, bonuses and incentives, fees for innovation and improvement, rewards for spreading the knowledge and flexibility. They extend to indirect material gains which are not received directly in form of wages and money (scholarships, tuition fees, study tours, trainings, paid absence and free days, official car and managerial benefits). Nevertheless, human needs are not necessarily material and justifying the use of non-material rewards in creativity management. Although the purpose of non-monetary rewards is to increase quality and speed of decision making and opportunities at work, the general interest is the motivating employees to solving problems (Omazić et al., 2011). It is argued that they are not less than material reward and these packages, which non-material and non-cash incentives capable of driving workers towards need satisfaction. This is evident with the use of praises, attention, training and medal award.

The concept of creative motive is built from that of motivation, and refers to an urge that moves any individual into action with the emergence of a need that requires satisfaction. It has a close tie with the concept of agency since the desires realize any creative work performance depends on the willingness of the employee. Intrinsic motive refers to the drive associated with actions that are inherently interesting and enjoyable, while extrinsic motive refers to the act of doing something because it leads to a separable outcome (Ryan & Deci, 2000). Motivation is important in all creative endeavors being initiated and carried out by the employee. Despite the understanding that intrinsic motivation has been observed as highly instrumental in promoting creativity, the combination of both intrinsic and extrinsic motives are relevant to creative ventures. People are said to be intrinsically motivated to engage in a particular task if they view their task engagement as motivated primarily by their own interest and involvement in the task (Amabile, 1997). This explains the drive towards creativity and how it relates more with

intrinsic than extrinsic motivation, but not undermining the power of extrinsic drives in goal attainment.

Creative competence is a core value and very essential in achieving creativity and innovative outcomes. To Kolibačova (2014) competence refers to the whole of individual abilities, skills, behaviors and knowledge, oriented to effective performance in a given work setting. This implies intellectual resources and technical knowledge capable of transforming challenges into novel situations or products. Creative competence is a special form of competence where the solution to a problem relies on the creativity of the solution behaviour. It implies a combination of skills (knowledge, skills and attitude) necessary for employees to work in a new way to ensure creative performance, and this can be affected by reward schemes of an enterprise. An individual's skill level may also help to facilitate creative performance in the organization (Hon, 2012), and this is why creative competence is becoming topical in business organizational processes. In the process, new skills and behaviors are applied to explore novel products, ideas, styles or techniques as responses to challenges emerging from strategic objectives of an enterprise.

Job satisfaction is one of the most important variables in organizational behavior and defined as the general attitude, positive feelings and emotions which employees view their work (Sarwar & Abugre, 2013; Yee et al., 2014). It is an affective and cognitive variable that refers to assessment of level of positive feelings derived from the tasks, relationships and work environment of the employee. The understanding of satisfaction is quite subjective and depends on the experiencing subject. In this way, the nature of the job and match with evolving desires and attitudes is evaluated on the employee's terms in relation to a sense of accomplishment at work, rather than on a particular action which may have been identified as creative by managers or experts (Sacchetti & Tortia, 2011). Job satisfaction has been perceived as a favorable situation towards the working environment (Raju, 2017), and this justifies the relationship between creative problem solving rewards and job satisfaction of employees. Job satisfaction is associated and measured from different dimensions, and currently measured in terms of creativity rewards.

Theoretical Framework

Amabile (1983) proposed the componential theory of creativity to describe the creative process and the various influences on the process and its outcomes. The theory assumes that there exists a continuum from low, ordinary levels of creativity found in everyday life to the highest levels of creativity found in significant inventions, performances, scientific discoveries, and there are degrees of creativity in the work of any single individual. The theory specifies that creativity requires a confluence of all components and this is comprehensively useful for organizational creativity (Amabile, 2012). In this theory, four components have been proposed for any creative enterprise. This first three are within the individual:

(1) Domain relevant skills refers to expertise in the relevant domain or domains where the problem solver is working.
(2) Creativity-relevant processes refer to cognitive and personality processes conducive to novel thinking such as cognitive style and personality characteristics associated with independence, risk-taking, skills in generating ideas and taking new perspectives on problems.
(3) Intrinsic task motivation refers the motivation to undertake a task or solve a problem because it is interesting, involving, personally challenging, or satisfying – rather than

undertaking it out of the extrinsic motivation arising from contracted-for rewards, surveillance, competition, evaluation, or requirements to do something in a certain way, and,

(4) The social environment in which the individual is working, which is outside the individual. The theoretical foundation has been very much useful in the stream of organizational behaviour (Zhang & Gheibi, 2015), and this is relevant in the analysis of creative problem-solving behaviors and they could be transformed within the realms of critical incidents. From the orientation of the theory, all workers involve in creativity behaviors at all times, and this is often observed in domain-specific activities. Creative problem solving is dependent on intrinsic drives and organizational support through reward schemes are highly recommendable in promoting creative enterprise at work.

The Two-factor theory (Herzberg et al, 1959; Herzberg, 1966) has been used to understand the dynamics of rewards and creativity. The theory attempts to explain the factors that affect motivation and satisfaction of employees at work. Based on their famous survey, they observe that employees describe satisfying experiences in terms of factors that were intrinsic to the content of the job itself. The Critical-Incident Method was used to gather data on positive or negative experiences at work, and trends were found between what were termed hygiene factors and motivator factors (Shawn, 1917). "Motivators" included variables as achievement, recognition, work itself, responsibility, advancement and growth. Conversely "dissatisfying experiences", derived from "hygiene" factors were mainly from extrinsic, non-job related factors such as company policy, co-worker relations, salary, supervisory styles. The theory argued that eliminating the causes of dissatisfaction through hygiene factors will not result in a state of motivation and satisfaction, but in a neutral state. Motivation and satisfaction would occur only as a result of the use of motivators. The theory concludes that hygiene factors lead to neutral state of motivation and satisfaction, while motivator factors engender a high state of motivation and satisfaction. The Two-Factor theory has been perceived as one of the most important theories of motivation (Shawn, 1917), and this has been used in the current study to explain reward as antecedents of creative performance. The understanding is that motivator factors could significantly relate with creative problem solving while hygiene factors undermine and at times frustrate creative performances.

Expanding Literature on Reward and Creative Performance

The present section reviews literature bearing on the relationship between rewards, creative problem solving and satisfaction of workers. Although creativity is a key factor in performance, there has been much interest in the determinant of the cognitive resource, though some researchers have acknowledged the strength of intrinsic rewards in promoting creativity at work. Da Silva et al. (2010) reported that learning goal orientation was positively related to creative performance, while avoiding goal orientation was negatively related to creative performance. Generally, goal orientation gives a good sense of direction to the organism in terms of any occupational challenge, and solutions are obvious necessitating intrinsic creative actions. Liu et al. (2016) found that intrinsic rewards, creative self-efficacy, and pro-social motivation predicted creativity, and that the predictors functioned differently as mediators between contextual and personal factors and creativity. Awan & Zamir (2016) found that empowerment and self-esteem significantly related with employee creativity in the private sector. It is evident that intrinsic values influence creativity of workers in organizations. Furthermore, Lapėnienė & Dumčienė (2012) discovered that subjective creativity, goal internalization motivation, intrinsic instrumental drives had positive relationships with creativity, although only goal internalization motives predicted worker's creativity. In another

study, Chan & Ma (2017) showed that recognition, praises and verbal appreciation of employees' abilities were able to determine creativity. Sipa (2018) observed that freedom to come forward with new solutions and a culture of continuous learning positively related with creativity. Although creativity has not been distinct into intrinsic and extrinsic in the foregoing studies, the basic understanding is that non-material rewards have a close relationship with extrinsic creativity motivation. It is therefore feasible that intrinsic packages are expected to relate significantly with creative motives of employees during critical incidents in local context.

Despite the fact that literature on the relationship between monetary rewards and creativity is scarce, some related works have been reviewed. Chan & Ma (2017) observed that salary and commission significantly influenced creativity. In the same vein, Sipa (2018) reported financial motivators as being more important than non-financial since financial motivation achieved a higher score in predicting creative performance. Charness & Grieco (2018) equally realized that creativity was higher with closed task with the introduction of extrinsic incentives, indicating the effectiveness of financial incentives on close tasks. They further observed that monetary incentives (piece rates and bonuses) worked well when tasks are coined with reasonable clarity. Of interest to these results is the fact that employees were able to work better and produce something new with the introduction of hygiene factors.

Although most conceptualization and theories recognize intrinsic motives as determinants of creative motives, monetary rewards have a say in creative behaviour of employees. Some studies have equally reported moderate results between material incentives and creativity behaviour. Wieth & Burns (2014) found that material incentives led to increase in problem solving in a single task condition, but the incentive was unable to increase problem solving success in multitasking. This means that the strength of hygiene factors depends on the nature of the creative task. Despite the absence of local literature, hygiene factors cannot be underrated in encouraging creative problem solving ventures.

Some research activities have investigated creative competences factors in organizations (Da Silva et al., 2010), and the role of reward has featured in some of the studies as predictors. Hon (2012) examined employees' perceptions of competency based pay and relationship with creativity, and competency based pay (reward for knowledge and reward for skill) were able to predict creativity. Awan & Zamir (2016) also realized that employee empowerment and self-esteem positively and significantly associated with competence. In addition, the need for power moderated the relationship between competency based pay and employee creativity. Anyway, these are all intrinsic factors, though they were found to be predictors of creative competence. Some insignificant relationships were reported between intrinsic rewards and creative competence of workers. This is the case of Kolibačova (2014) who found that employee competency was independent of rewards being administered to them. This implies that the reward package was insensitive, and consequently unable to influence competence of employees. This was a single study and the reward system of the enterprise might have moderated creative competence of the participants. It is evident that motivator factors have shown significant relationships between non material reward, and it is expected that this will be translated into creative competence at resolving critical unexpected turnouts.

Some studies have tested the relationship between rewards and satisfaction of workers, and some tangible and intangible incentives have been assessed. Sacchetti & Tortia (2011) revealed that satisfaction for creativity was supported at organizational level by teamwork-oriented action, including the quality of processes, relations and on-the job autonomy, and this was

enhanced by the strength of intrinsic and socially oriented motivations. Sarwar & Abugre (2013) observed that material rewards induced positive job satisfaction of employees, and that job satisfaction of employees stimulated their loyalty. However, a very high level of employee dissatisfaction was recorded for employee pay and the amount of work they were required to perform. Yee et al. (2014) discovered creative organizational climate as an important predictor of job satisfaction and work performance, and that managers play an important role in creating working environments that promote creativity. It was observed that factors that could create a creative climate in their organizations need to be encouraged and those that inhibit creative climate eliminated to increase overall job satisfaction and performance in the organization. Meanwhile, Raju (2017) found that a high and positive relationship existed between teacher creativity and job satisfaction. This expressed a dire need to create better environment to enhance quality and creativity among the workers, and the institution of relevant reward schemes has been perceived as a viable option. Although a few studies explored the relationship between material rewards and satisfaction, it is assumed that material incentives administered to workers will equally affect satisfaction of employees to display creative performance during critical incidents.

Theoretical Model and Hypothesized Relationships

Building on the componential theory of creativity and the two-factor theory of motivation, the study explored the relationship between the operational frameworks of rewards and creativity motivation, competence and satisfaction of employees within the context of creativity and innovative culture. Drawing from literature, it is hypothesized that non-material rewards will lead to an increase in the level of intrinsic creative motive, and that increase in material reward will predict a corresponding increase extrinsic creative motive. The study also expects that non-material rewards will affect creative competence of employees, while both material and non-material rewards will predict a significant relationship with satisfaction of workers. The study tests a model that positions the perception of predictor variables as determinants of creativity, motivation, competence and satisfaction of employees during critical incident, and therefore proposes the following hypotheses:

1. Non-material creativity reward will have a significant effect on intrinsic creative motive of employees
2. Material creativity reward will have a significant effect on extrinsic creative motive of employees
3. Non-material creativity reward will have a significant effect on creative competence of employees
4. Non-material and material creativity rewards will have a significant effect on satisfaction of employees

Methodology

In order to test the relationship between non-tangible and tangible rewards on creative problem solving dispositions, employees were recruited from the Higher Institute of Management Studies (HIMS), Buea, Cameroon. These workers have enjoyed reward packages for creative performances, and have either benefited or witnessed critical incident awards. Sample constituted 50 workers (37 males; 15 females). Most participants were holders of Master's Degree (46.0%), followed by First degree (20.8%) and Doctorates (8.0%), while 25.2% were non graduates. The study was a case study and simple random sampling was used in data gathering. Out of 69 questionnaires distributed, 50 were returned giving 74.62% response rate.

With regards to instrumentation, a self-report inventory was used to measure employee perceptions of reward, creative motive, creative competence and satisfaction. The subscale for non-material reward had six items, (α=.869), and measured recognition and appreciation for publications, creativity, invention, initiatives, creative problem solving and innovative practices. Sample questions: "Provision of training to staff" and "Appreciation of creativity by staff." That of material reward had seven items (α=.701), and explored service vehicle, fuel allowance, social insurance, daily snacks, medical expenses, performance award and remuneration. Sample question: "Provision of building assistance to staff" and "Health assistance to workers." The sub scale for intrinsic creative motives had five items (α=.618), and measured enjoyment of work, interest, achievement, love and autonomy. Sample questions: "I enjoy creative actions" and "I like bringing new solutions to problems." Subscale for extrinsic creative motive comprised eight items (α=.832), and measured approval, allowances, lodging assistance, car award, building award and scholarship. Sample questions: "I am creative to have more allowances" and "I am creative to win building assistance." The subscale, creative competence, 6 items (α=.82), explored risk taking, responsiveness, interest, efforts, aptitudes, and talent. Sample questions: "I like taking risk on the job" and "I am responsive to emerging problems." The Generic Job Satisfaction scale, Macdonald and Maclntyre (1997), was adopted, 10 items (α=.888), comprising workplace affect and affective reactions. Sample items, "I receive recognition from my job" and "I feel close to the people I work with." In sum, the instrument was considered as reliable with an aggregate alpha of .788. The variables were measured using 5-point Likert scale ranging from 1= strongly disagree, 2=disagree, 3= neutral, 4= agree to 5= strongly agree. Permission to carry out the study was requested and authorization granted to the investigator by the authority of HIMS. Consent was sought and questionnaire was administered to volunteer employees. The inventory was self-administered and employees were requested to fill them according to their perceptions. Incomplete questionnaires were discarded. Data were entered into SPSS, and descriptive and inferential statistics used to test expectations.

Descriptive Results of Study

Results of means, standard deviations, and correlation have been presented in Table 1. Non-material reward positively related with material reward ($r=.404$, $p< .01$), intrinsic creative motive ($r =.342$, $p<.05$), extrinsic creative motive ($r=.380$, $p<.01$), creative competence ($r=.453$, $p<.01$) and satisfaction ($r=.414$, $p<.01$). Material reward significantly related with intrinsic creative motive ($r =.488$, $p<.01$), extrinsic creative motive ($r=.491$, $p<.01$), creative competence ($r=.350$, $p<.05$), while the relationship with satisfaction was insignificant ($r=.258$, $p>.05$). Furthermore, intrinsic creative motives correlated significantly with extrinsic creative motives ($r=.569$, $p<.01$), creative competence ($r=.319$, $p< .05$), and satisfaction ($r =.423$, $p< .01$). Although the relationship between extrinsic creative motive was insignificant with creative competence ($r=.080$, $p>.05$), it was significant with satisfaction ($r=.499$, $p<.01$). Nonetheless, creative competence correlated significantly with satisfaction ($r=.387$, $p<.01$). It would be noted that the relationships were generally positive and significant at $p< .01$, indicating a moderate degree of association among the variables. On account of the nature of relationships, it is feasible that reward types are expected to affect changes on dimensions of creative performance, and satisfaction. Means, standard deviations and reliability coefficients have been presented.

Variables	Mean	Std.D.	α	1	2	3	4	5	6
Non material reward (1)	25.36	4.22	.869	1	.404**	.342*	.380**	.453**	.414**
Material reward (2)	28.18	4.39	.701	.404**	1	.488**	.491**	.350*	.258
Intrinsic creative motive (3)	20.16	3.10	.618	.342*	.488**	1	.569**	.319*	.423**
Extrinsic creative motive (4)	29.96	6.10	.832	.380**	.491**	.569**	1	.080	.499**
Creative competence (5)	27.37	2.55	.820	.453**	.350*	.319*	.080	1	.387**
Satisfaction (6)	40.02	7.14	.889	.414**	.258	.423**	.499**	.387**	1

**Correlation is significant at the 0.01 level (2-tailed).
*Correlation is significant at the 0.05 level (2-tailed).

Table 1: Bivariate correlation and descriptives

Testing Expectations of the Study

The study investigated the perceived strength of creativity rewards on creative motives, creative competence and satisfaction of employees. Firstly, the study explored the relationship between non-material reward and intrinsic creative motive, and results of simple regression presented in Table 2. According to analysis, non-material reward significantly predicted intrinsic creative motive of employees, β=.342, $R^{2=}$.117; t=2.523, P=.015. Non-material reward was able to determine the variation in intrinsic creative motive of workers at 11.7%, with the understanding that a one-unit increase in non-material reward will lead to one-unit increase in intrinsic creative motives (b-value= .251). Consequently, the hypothesis is accepted, confirming non-material reward as a significant determinant of intrinsic creative motive.

Model	Predictor (Reward)	R	R^2	Adj. R^2	F value	B	SE	*β*	t-values	P. Values
Model 1	Non material	.342	.117	.099	6.365	.251	.100	.342	2.523	.015

Table 2: Predicting intrinsic creative motive

The second assumption predicted that material creativity reward will have a significant effect on extrinsic creative motive of employees, and results are presented in Table 3. Material reward significantly predicted extrinsic creative motive, β=.491, $R^{2=}$.241; t=3.904, P=.000. As expected, results indicated that material reward was able to influence the variation in intrinsic creative motive at 24.1%. The b-value (.251) suggested that a one-unit increase in material reward will lead to a corresponding increase in intrinsic creative motive of workers. Therefore, the hypothesis that the predictor has a significant influence on the outcome measure is confirmed, and can inform creative problem solving during critical incidents.

Model	Predictor (Reward)	R	R^2	Adj. R^2	F value	B	SE	*β*	t-values	P. Values
Model 1	Material	.491[a]	.241	.225	15.242	.683	.175	.491	3.904	.000

Table 3: Predicting extrinsic creative motives

The relationship between non-material reward and creative competence was tested and results presented in Table 4. Analysis revealed that non material reward significantly determined creative competence of employees, β=.453, $R^{2=}$.205; t=3.445, P=.001. The independent variable was able to determine the variation in the outcome measure at 20.5%, and projected that an increase in the predictor variable (B-value .683) will lead to a corresponding increase in creative competence. Consequently, the alternative hypothesis of a significant relationship was accepted.

Model	Predictor (Reward)	R	R^2	Adj. R^2	F value	B	SE	β	t-values	P. Values
Model 1	Non material	.453[a]	.205	.188	11.871	.281	.081	.453	3.445	.001

Table 4: Predicting creative competence

In the fourth hypothesis hierarchical regression was performed to examine the effect of non-material and material creativity reward on satisfaction as expected by employees, and results presented in Table 5. In the first model, non-material reward predicted satisfaction of employees, β=.414, $R^{2=}$.171; t=3.146, P=.003. Thus, the independent variable was able to predict 17.1% of the variation in the outcome measure. In the second model non-material and material rewards (β=.108, $R^{2=}$.425; t=2.567, P=.014) accounted for the variation in satisfaction of workers at 42.5%. But material reward failed to predict satisfaction, β=.108, t=.748, P=.458. It was evident that a significant relationship exists between non material rewards and satisfaction, but not between material rewards and satisfaction.

Predictors (Rewards)	Unstandardized Beta (B)		*SE B*	Standardized Beta (β)		*t*	*P*
	Step 1	Step 2		Step 1	Step 2		
Non material	0.699	-	0.222	0.414	-	3.146	.003
Non material		0.625	.244		.370	2.567	.014
Material	-	0.176	.235	-	108	.748	.458

Step 1: $^{R2=}$ 0.414; Adj. $^{R2=}$0.171; Sig. F = 0.003; F-value = 9.900; satisfaction; $p < 0.01$
Step 2: $^{R2=}$ 0.425; Adj. $^{R2=}$0.181; Sig. F = 0.458; F-value = .560; satisfaction; $p > 0.05$

Table 5: Regressing rewards on satisfaction

Discussion

This study explored the predictive powers of creative problem-solving reward on creative motives, competence and satisfaction of workers with creativity rewards. Firstly, results supported the proposition that non-material creative problem-solving rewards can determine intrinsic creative motive of employees. Findings are consistent with previous studies on learning and goal orientation, goal internalization motivation, intrinsic process motivation and instrumental drives (Da Silva et al., 2010; Lapėnienė & Dumčienė, 2012), initiatives and idea generation (Binnewies & Gromer, 2012), and creative self-efficacy and pro-social motivation (Liu et al., 2016). Although current results do not build directly on non-material reward and intrinsic creative motive, they are relevant because the dimensions of extrinsic and intrinsic creative motives have hardly been assessed. In addition, these are indicators that motivator factors can be instrumental in promoting intrinsic creative motive. Despite the fact that prior investigations were conducted out of the present context, results still suggest that intangible rewards can predict intrinsic creative motive in a local context. It is evident that employees are expected to perform creative assignments during critical incidents because of interests, challenges and drive for achievement and not necessarily due to tangible rewards.

Analysis confirmed material reward as a predictor of extrinsic creative motives, suggesting that employees will be extrinsically motivated when administered concrete material rewards. This holds true with research by Wieth & Burns (2014) where material incentives led to increase in extrinsic creative competence. Furthermore, prior investigations on material reward system (Awan & Zamir, 2016), tangible rewards (Chan & Ma, 2017) and financial motivators

(Charness & Grieco, 2018; Sipa, 2018), support the present results. Although dimensions of material and physical rewards have been a controversial factor in intrinsic creative motives, the present investigation projects material reward as a powerful determinant of intrinsic creative motives. This implies that the more material rewards are provided the more workers will be extrinsically motivated towards creative performance. Given the present findings, managers who desire to promote creative problem solving need to design packages, and enforce practices that can enhance creative motives of employees.

The third hypothesis on the relationship between non-material rewards and creative competence was confirmed, and it became evident that the administration of motivation factors will significantly predict creative competence of employees. This is consistent with the works of Sipa (2018) on non-financial motivators, and Chan & Ma (2017) on recognition, praises and verbal appreciation positioned as predictors of competence. Furthermore, it agrees with Awan & Zamir (2016) on empowerment, self-esteem with self-determination and competence, and Hon (2012) on competency-based pay. However, the results contrast the results of Kolibačova (2014) where reward packages failed to influence competence of participants. Generally, employees known for creative competences are high in preference for intrinsic rewards, though the needs for economic rewards for subsistence purposes often moderate creative competence in in local contexts. But at the same time workers can develop competence as a result of intrinsic rewards and later on change inculcate extrinsic values with high expectations through socialization with reward systems and practices. This agrees with Omazić et al. (2011) that material rewards are very important to employees, but are susceptible to changes towards non-material incentives with changes in the environment. It is probable that as a result of expectations drawn from compensation packages of HIMS, workers feel that it is necessary to develop their competences in order to act creatively during critical incidents, and perhaps attract heavy tangible rewards in return. This is justified by the fact that in HIMS, innovative culture practices are highly rewarded with hygiene factors, and this appears to have raised very high expectations among employees.

One aspect of creativity reward outcome that has not been addressed in literature is satisfaction derived from creativity rewards during problem solving, particularly at critical incidents. Analysis confirmed the influence of material and non-material rewards on satisfaction of employees, though material incentives as a variable failed to induce positive feelings towards creativity reward. Results are consistent with prior investigations on organizational support, teamwork-oriented action relations, autonomy satisfaction (Sacchetti & Tortia, 2011; Sarwar & Abugre, 2013) and creative organizational climate as predictor of job satisfaction (Raju, 2017; Yee et al., 2014). It has been acknowledged that non-material rewards are more relevant than material rewards with regards to satisfaction of employees. Despite the powerful material packages introduced in the reward system, they are not able to satisfy the workers. Perhaps this may be due to the fact that very few people obtain the reward. Despite the invaluable nature of intrinsic motivators, material compensation and incentives are directed toward securing and improving financial status of employees and financial compensation for work (Omazić et al., 2011), and should be reinforced with motivator factors at all times.

Implications of the Study

This study set out to analyze creativity rewards and its relationship with creative motives, competence and positive feelings obtained from reward packages and if this can be translated to creative performance during critical incident. Results have both theoretical and practical implications. The study reinforces existing theories explaining creative performance and

relationships with outcome measures. Moreover, the relevance in context of the componential theory of creativity and the two-factor theory of motivation are evident. The study proved that outcomes in terms of creative motives, competences and satisfaction were truly affected by varying dimensions of reward. Non-material rewards significantly predicted intrinsic creative motives of workers and this suggest that motivator factors should be reinforced by the organization such that workers should have better meaning in work and enjoy creative challenges. The reward system of the institution should concentrate on intrinsic rewards, which are capable of generating intrinsic motives with regards to creative performance. This goes with the recognition that the social environment can have a significant effect on that person's level of intrinsic motivation at any point in time and the level of intrinsic motivation can, in turn, have a significant effect on that person's creativity (Amabie, 1997). The beauty and cost effectiveness of non-material rewards and intrinsic creative motives lies in human capital, and attracts no extra material cost as is the case with extrinsic incentives. This agrees with Wang & Holahan (2017) that creative performance can be influenced by the level of self-determination and intrinsic interest. The significant relationship between non material reward and extrinsic creative motives suggests that the more the enterprise employs motivators, the more creative the workers in handling sudden and unexpected problems at work.

Material creativity rewards truly influenced extrinsic creative motives of employees, indicating the importance of hygiene factors. The tendency that extrinsic incentive begets extrinsic motivation is shown with significant results between tangible rewards and extrinsic motive. Considering that there is room for creativity in all jobs, extrinsic incentives are necessary. It should be recalled that although intrinsic motivation is clearly an important type of motivation, most of the activities people do are not, strictly speaking, intrinsically motivated (Ryan & Deci, 2000). This “means-end” notion suggests that the enterprise has put in place exciting material rewards to spur workers face challenges of critical incident. It is possible that this has conditioned the perceptions of creative performance by workers as a means to attract material benefits, but this may draw from the practices of the organization due to express need for subsistence. The danger with extant material incentives is that when once the rewards are no longer available, creative performance may automatically extinct unlike psychological rewards. Consequently, material rewards should be administered with caution, and should not at any time undermine reinforcement from relevant immaterial incentives.

Results also suggested that intrinsic rewards were instrumental in influencing creative competence of employees. As mentioned in the study, non-material creativity rewards predicted creative competence of employees. Since workers cannot perform effectively on native ability, identifying factors that affect attitude, knowledge and skills of workers is indispensable. Although the relationship between material reward and creative competence was not assessed, recommendable intrinsic measures should be put in place to influence creative competence of employees. The critical nature of competence is seen in the fact that employees are able to carry out the work in responsible and effective manner in the process of creating impressive performance (Kolibačova, 2014), and this is a viable facility in creative problem solving. Results show that creative competence of workers is a function of the employee’s psychological needs and enterprises need to be creative in administering non material rewards as a measure of competence development. Employee competences are used in a number of ways, and though training and development has been recognized, reward strategies can make a difference.

Feeling positive at work is good business and a core factor in occupational health and job performance. A good working environment is a key factor in creating job satisfaction (Yee et

al., 2014), and the reward systems and administration very essential. Although employees were satisfied with the combination of material and non-material creativity rewards, they equally indicated their dissatisfaction with material rewards as a measure of creative performance. This is expected to affect positive feelings towards creativity rewards during critical incidents. This expresses a need to review the colossal material rewards that are being administered to deserving workers at the end of the year. It should be recalled that only a few workers benefit from this award, and the gap between normal creative incentives and the award is too wide. It is therefore essential for the enterprise to creatively propose intrinsic reward packages that can lead to ulterior benefits for majority of staff. In terms of implementation, much should be done to introduce non-material and material rewards as factors in achieving satisfaction. But particular interest should be given to fostering intrinsic values as a strategy to influence positive feelings and attitudes, which will go a long way to improve intrinsic creative performance of workers.

Conclusion

Creativity is indispensable in realizing organizational goals and there is a dire need for workers to be more creative in order to meet the competitive demands of a changing workplace. But considering the constraint of organizational resources, researchers and managers are eager to know which mechanisms are most useful for boosting employee creativity (Liu, 2016). According to conventional wisdom, creativity is something done by creative people (Amabile, 1997), and this is what the making of creative workers is critical in creative problem solving. It has been argued that although individual factors determine creativity, environmental factors, particularly organizational factors, can influence creativity of workers in any job situation. Among other factors rewarding creative performance constitutes a viable measure of promoting creativity among workers at critical incidents. The evidence that intrinsic creative rewards relates significantly with intrinsic creative motivation implies that intrinsic values need to be harnessed and promoted in organizations to inform intrinsic creativity and innovation. Therefore, rewards are invaluable factors in innovation and change, and should be properly administered to catalyze intrinsic motivation. Critical reflection is important because as the focus of business becomes more customer-service oriented, workers must be able to conceptualize products, services, and consequences of their own role in the product service process (Prayer, 1993). More and more, employees at all levels have challenges to deal worth uncertainty, to revise task and to anticipate unfamiliar problems and develop a higher level of conceptual skills and this can be encouraged by sensitive reward systems and practices. If the working environment in both physical and psychological sense enables and encourages workers to be creative then they can bring in higher level solutions to problems of the organization (Byron, 2006). Despite ongoing debates, there are evidences that both intrinsic and extrinsic motivations play different roles in activating and energizing varying creative behaviors of employee in contexts. Managers should therefore recognize that employees' creative performance outcomes at critical incidents could be attributed to both motivators and hygiene factors, though at varying interests and directions.

Limitations and Future Directions

Although the study has provided some useful insights into creative performance during critical incidents, limitations abound for obvious reasons. Due to the relatively small number of respondents, and the fact that it is a case study of a single enterprise, generalization of findings need to be done with caution. Secondly, the study uses basic creativity rewards, and indirectly infers outcome on creative problem solving during critical incidents, which may not adequately

translate outcomes on the ground to critical incidents. The theories are relevant in context, but investigation studies should be carried out to expand the scope of analysis of the componential theory of creativity and two factor theory for necessary practicability. It is therefore recommend that an expansion of the study in future, using many organizations in different sectors is very relevant. Nonetheless, the strength of material and nonmaterial rewards in predicting extrinsic and intrinsic creative motives in their individual capacities will clarify who is who in determining what type of creativity drive and competences.

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